ABSTRACT

A method of diagnosing, in a network comprising two devices (A), (B) connectable by a link (20), which link may be a physical link such as a cable or may be a wireless link, the type of failure of the connection between the devices (referred to as "link failure", although the failure may only be a partial failure such as lack of synchronisation and may lie not in the link itself but in the one or both devices or the protocol used), said method comprising connecting the two devices together (for example, by physically connecting them or switching on the link between them), at least one (B) of the devices including a plurality of registers (23), each register being adapted to store data about one or more types of said failure, running an auto-negotiation sequence, detecting said failure and passing signals relating to that failure to the relevant register(s), interrogating the or each register, and determining the type of said failure.

Examples of link failure are:

loss of light;

bit/word alignment failure;

loss of synchronisation during auto-negotiation;

auto-negotiation protocol hang during base page exchange;

auto-negotiation protocol hang during next page exchange;

auto-negotiation protocol (repeated) restart due to link partner initiating a "break link".

There may be included software for controlling the method which includes routines which are able to analyse the information from the registers (23), and to pass signals to a visual display unit (26) to display thereon a message which in accordance with the type of failure determined by the method includes a suggested course of action to overcome the failure.

13